

Ref: 22-605

Kathryn Greenhaigh & Andrew Chadwick
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Heywood
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30th June 2022

Dear Ms Greenhaigh and Mr Chadwick

STOCK NOOK FARM, DOCTOR FOLD LANE, HEYWOOD

An inspection of the barn/outbuildings at Stock Nook Farm was carried out during Wednesday 30th June 2022; the inspection being undertaken in order to comment upon the overall structural stability of the units. The subsequent report is being prepared in order to satisfy Planning Application requirements.

The buildings in question consist of three units. The larger being far more substantial than the other two. The larger consists of a substantial two floor unit with a single storey extension. The other units consist of two brickwork buildings which, in the proposed development are linked. At the time of our inspection, access could not be gained into the smaller of these units.

For the purpose of this report, buildings have been described as buildings 1, 2 & 3 with buildings 2 & 3 ultimately being linked. These are shown on the attached figure.

Building 1

- The two storey element of building 1 has predominately brick elevations, along with timber first floor infill to the front elevation and plastic coated sheet steel to the rear.
- The main structural support to the front and rear elevations is provided by substantial brick piers which extend for full height. To both the front and rear, the ground floor area has been infilled with 225mm solid brickwork. This brickwork does not have the benefit of any headers acting as through stones. The long front and rear elevations of the two storey element were found to be uneven, though overall reasonably vertical. Also, the end gable elevation plus the stepped gable (where possible to



view) were also found to be uneven though tending to be reasonably vertical.

- To the front and rear elevations and the end gable, ground floor openings have the benefit of timber heads. These were clearly deflecting and indeed have been affected by rot.
- The single storey element has elevations constructed using 140 thick hollow blocks.

To the rear elevation and to the rear section of the end elevation, the wall thickness to a lower level increases to 225 thick.

- There are clearly some vertical joints in the blockwork to the front, end and rear elevations of the single storey element. It is quite likely therefore that there has been some infill or indeed the walls have been extended at some time.
- To the rear elevation of the single storey extension, there are some lateral deflections affecting the wall with maximum deflections tending to occur at about mid wall height and measured at approximately 30mm. This is considered likely due to the poor quality of the block laying.
- The roof above the main unit is supported on a substantial queen post truss along with significant sized timbers, purlins and rafters. It is also clear that the roof has likely been renewed at some stage with the provision of felt.
- The roof above the single storey extension is provided by timber truss rafters. Felt is also present. Truss rafters are also provided with bracing.
- The suspended first floor to the two storey unit relies on support by steel beams spanning front to back, along with timber joists.

Based on the above observations the following comments can be made:

- We consider that no significant works are necessary to walls of either the two storey or single storey section of the property.



We would anticipate that the single storey element will most likely have a timber framed inner lining which can be secured to the external elevations, therefore enhancing overall stability.

- To the two storey element, it will be necessary to replace all the timber heads with appropriate replacement lintels.

We would anticipate that this element of the structure also will be augmented by internal framing (to provide the insulation) which can be secured back to elevations, therefore increasing stability.

- We would anticipate that the roof support system to both the two storey and single storey element will be adequate to carry imposed loadings. We anticipate that the roof will be stripped in any event and relayed on new batons and felt to ensure the water tight nature of the roof.
- Analysis of the floor joists in the two storey unit shows them to be adequately sized in terms of allowable stress and deflection (under normal loading conditions). Depending on the location of partitions, it may be a requirement to carry out some augmentation.
- Analysis of the steel support beams shows them to be adequately sized if the steel beams are adequately restrained.

Building 2

- Unit 2 has clearly been extended on at least one occasion and consists of solid brick elevations. All elevations were found to be uneven, though reasonably vertical apart from the south facing elevation which was showing a slight lean outwards with height. This is most likely due in part to a failed lintel above a doorway in the east facing elevation, with this immediately adjacent to the south facing wall.
- Brickwork to the south facing elevation is in an advanced state of deterioration (due to weathering). Also, the wall has a long timber wall plate visible for more or less its entire length, now affected by decay.

- To the base of the east elevation, severe weathering was locally affecting brickwork.
- The north elevation has the benefit of a substantial opening with timber panelling to the upper level.

Adjacent to the substantial opening is a personnel door with a failing timber head.

Based on the above observations the following comments can be made:

- No evidence was found to indicate that this section of the unit has been affected by any substantial differential vertical movement.
- Lateral deflections affecting the south facing elevation are most likely due to failure (at least in part) of the adjacent doorway head. Decay affecting the long timber wall plate may have also played a part.

This wall in any event is showing significant deterioration of brickwork due to weathering. We would reasonably expect therefore that this wall will be taken down.

We note from the proposals that this is an area which is going to be linked to unit 3. It may well be prudent therefore to more or less remove the wall and to replace as an opening or indeed as a glazed unit in the building link.

- We anticipate again that the roof will be stripped and relaid to ensure the water tight nature. It is clear that this roof in any event has been re-roofed (using Marley type interlocking concrete tiles.

Building 3

- Unit 3 has the benefit of brick elevations showing courses of headers acting as through stones.
- The front (east) elevation, plus the west and south elevations were found to be uneven, though tending to be reasonably vertical.



- The right hand elevation was showing lateral deflections with maximum deflections tending to occur at what would be near to ground floor height and with deflections tending to be tied back to zero at ground level, the return elevation walls and what would be first floor level.

Based on the above observations the following comments can be made:

- No evidence was found to indicate that unit 3 has been affected by any differential vertical movement.
- No rebuilding work (other than tidying up of brickwork) will be required to incorporate existing walls into any redevelopment.
- It is presumed that the walls will be dry lined (timber framed) to allow for insulation etc. At this time, the timber framing can be connected to the external elevations, thus improving stability to an acceptable level.

The inspection of the barn/outbuildings at Stock Nook Farm revealed that the only element of any significant remedial works needed is to the relatively small south facing elevation of building 2. The stability of all units will be significantly enhanced by the provision of partitions, both to ground and first floors. The most probable use of timber framing will also add to the overall stability by connecting existing elevation walls into the timber framing system.

We have not inspected parts which are covered, unexposed or inaccessible, and are therefore unable to report that any such part is free from defect.

This report is for the sole use of the addressees and their professional advisers. The report cannot be assigned without the written authority of Holdgate Consulting Ltd.

Yours sincerely

Ian Holdgate
for Holdgate Consulting Ltd

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architects[illegible]